

**Applicant Name** Stillwater Conservation District  
**Project Name** Stillwater-Rosebud Watershed, Surface Water/Groundwater Interactions

### **Project Abstract**

The Stillwater River and Rosebud Creek watershed has experienced tremendous population growth (over 28% between 1990 and 2000). People are drawn to the region by the scenic views and the numerous high-quality streams and fisheries, so they have a desire to maintain and protect these water resources into the future. However, the increasing population also poses a risk to these streams. Groundwater pumping may intercept baseflow to streams, or it may even intercept streamflows directly. The relationships between groundwater and surface water have not been defined in the watershed. It is also not known how much development the area aquifers can support.

This project will collect integrated groundwater and surface water data necessary to better manage and plan the development occurring in the watershed. Data from the project will be used to evaluate aquifer potential, assess recharge sources and rates, and evaluate the interactions between groundwater and the streams. The project will build upon previous well inventories to create a detailed groundwater monitoring network to evaluate seasonal level fluctuations. At selected locations, paired wells will be installed and tested to define aquifer characteristics. In addition, an extensive network of stream gauging sites will be established to assess groundwater discharge to streams and ditches and/or groundwater recharge from streams and ditches. This information will enable resource managers and area residents to make more informed decisions to manage development to protect the area streams. Public meetings will be conducted throughout the project to obtain public input and to present preliminary findings. Project information will be available free from the Internet and will include a report and maps depicting aquifer distribution, probable drilling depths, and groundwater flow patterns. The final report will describe how the data were collected and describe what the information means.